BUILDING G-AT3551
ASBESTOS (ACM) SURVEY
REPORT

SEPARATE BATTALIONS BARRACKS PROJECT
FORT BRAGG, NORTH CAROLINA

DACA21-00-D-0001
DELIVERY ORDER-0003

Submitted To

Department of the Army
Savannah District, Corps of Engineers
P.O. Box 889
Savannah, Georgia 31402-0889

Submitted By

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December 27, 2000

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EXECUTIVE SUMMARY

J.J. Sosa & Associates, Inc. was retained by the U.S. Army Corps of Engineers (COE) Savannah District to perform asbestos surveys for the Separate Battalions CAB at Fort Braggs, North Carolina. The surveys of Asbestos-Containing Materials (ACM) were performed at several buildings located in the area “A” on the main post. Copy of a site location map is included in this report. The buildings surveyed are to be demolished. This report contains the findings of the survey performed in **Building No. G-3551**. The JJSA inspectors designated the structure as **Building G**.

This effort consisted of a walkthrough and visual inspection to identify and sample suspect ACM existing in the structures. Laboratory analysis was performed on all suspect friable ACM and other non-friable materials that may become regulated during demolition activities. A sample location plan illustrating the areas surveyed is provided in Appendix A.

During the survey of **Building G-3551** a total of **twenty-one (21)** homogeneous areas were identified and sampled. A minimum of three (3) samples were collected from each homogeneous area and analyzed to determine whether they were below the regulatory threshold of 1% asbestos. Samples were given a unique alphanumeric identification (i.e. A-1, A-2, etc.). The letter represents the building designation provided by the inspectors to each building followed by a number starting with "1" increasing sequentially with the last number representing the total number of samples collected for the building.

The following materials were identified to contain asbestos in **Building G**:

- **330 ft.^{2} of 9" x 9" black floor tile and mastic in corps equipment room**
- **700 ft.^{2} of vinyl covering brown in latrine**
- **200 ft.^{2} of 12" x 12" beige floor tile and mastic in latrine**
- **1,500 ft.^{2} of Transite panels in the mechanical room**
- **500 ft. pipe insulation in mechanical room**
- **30 ft.^{2} pipe fittings in mechanical room**
- **800 ft.^{2} of Transite panels in the latrine**

Composite samples of drywall and joint compound were found to contain asbestos. However, the composite samples collected during the initial survey were not representative of the drywall/joint compound systems.

Additional samples were collected during a second visit to the building. A deliberate effort was made to collect a sample representative of the drywall/joint compound system. Analytical results of the additional samples were below the regulatory threshold of 1%.

1.0 INTRODUCTION

JJSA personnel conducted an asbestos survey at **Building G-3551** on **September 20, 2000**. This report contains the findings of the Asbestos Survey in accordance with the scope of work provided by the COE Savannah District.

2.0 REGULATORY REVIEW AND PERSONNEL QUALIFICATIONS

2.1 REGULATORY REVIEW

Asbestos-related activities, such as demolition, O&M and abatement, are controlled by many federal and state regulations including those of the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA). OSHA has promulgated standards for permissible airborne fiber exposure limits and requirements for worker protection during abatement and management of ACM. The EPA regulations were signed into law to protect the building occupants and the environment. Highlights of key regulations are as follows:

A. EPA Regulations:

National Emissions Standards For Hazardous Air Pollutants (NESHAP) (40 CFR 61)

This rule provides guidelines for renovation and demolition notification, removal and disposal of ACM. Also included in the NESHAP are rules concerning manufacturing, spraying and fabrication of asbestos.

Asbestos Hazard Emergency Response Act (AHERA) (40 CFR 763, Subpart E)

The Asbestos Hazard Emergency Response Act (AHERA) was enacted to control the exposure of school children, teachers and custodial personnel to airborne asbestos fibers at their facilities. AHERA requires the identification, sampling, assessment and remediation/responses of identified ACM at schools kindergarten through 12th grade. AHERA was revised to require that all personnel conducting asbestos investigations in schools as well as commercial buildings be trained and certified according to the regulation.

EPA Worker Protection Rule (40 CFR 763.120,121)

This rule extends worker coverage to state and local employees who perform asbestos work and who are not covered by the OSHA Asbestos Standards or by a state OSHA Plan.

Requirements include medical examinations, air monitoring and reporting, protective equipment, work practices and record keeping.

B. OSHA Regulations:

29 CFR 1926.1101: Construction Industry Standard

This standard covers employees engaged in demolition, construction, and response actions such as removal, encapsulation, alteration, repair, maintenance, insulation, spill/emergency clean-up, disposal and storage of ACM.

29 CFR 1910.1001; General Industry Standard

This standard controls the occupational exposures in general industry.

29 CFR 1910.134; Use of Respirators

The OSHA Respiratory Protection Rule defines the program and requirements as to when personnel are required and / or allowed to wear respirators. In general this OSHA coverage extends to all private sector employers and employees. Those not covered under the standard typically include self-employed persons and federal, state and local municipal employees.

State of North Carolina

In the State of North Carolina, any person who conducts asbestos work must be certified by the North Carolina Department of health and Human Services as provided in T15A: 19C.0600.

2.2 PERSONNEL QUALIFICATION

The survey fieldwork was performed on **September 20, 2000** by JJSA's representatives Mark Fohn and Rodney Carrero, PE under the direct supervision of Jose J. Sosa, PE, CIH. Mr. Sosa is a Certified Industrial Hygienist and a Professional Engineer. Mr. Carrero and Mr. Fohn both hold a current AHERA building inspection certificate from the State of North Carolina. Copy of the certificate and CIH certification is provided in Appendix B.

Mr. Fohn collected additional drywall joint compound samples on December 6,

2000.

3.0 SURVEY PROTOCOL

The survey was conducted using state-of-the-art protocol for sampling materials suspected of containing asbestos as indicated by the U.S. Environmental Protection Agency.

The survey involved a site inspection (visual walk-through) and identification of suspect ACM located in the building. An inventory of all accessible and / or exposed suspect ACM was conducted to determine all homogeneous materials inside and outside the building.

3.1 INACCESSIBLE AREAS NOT SURVEYED

An attempt was made by the inspector to reach all areas inside the building. However, if suspect materials are discovered during demolition in concealed spaces, demolition activities should stop and the materials sampled and analyzed.

3.2 MATERIALS NOT SAMPLED

There were no limitations noted during this asbestos survey. Bulk samples were collected from materials without concern for destruction to the structure or aesthetic damage since the building is schedule to be demolished. All suspect materials were given appropriate consideration. Likewise, materials visibly and completely identifiable as non-asbestos (fiberglass, foam rubber, wood, etc.,) were not sampled.

4.0 SAMPLING PROCEDURE

The technique used for sampling the suspected materials was designed to minimize possible fiber release and in turn possible contamination of surrounding areas. All representative "suspect" materials sampled, were collected in accordance with the EPA's AHERA and "Guidance for Controlling Asbestos Containing Material in Buildings" (EPA 560 / 6-85-024, June 1985).

The sample location was sprayed with an amended soapy water mixture. Then, a core sample of the material was collected and properly stored in labeled airtight bag. A chain of

custody form was completed for all bulk samples collected and subsequently delivered to IATL Laboratories for analysis using Polarized Light Microscopy (PLM). IATL Laboratories utilizes dispersion staining techniques according to US EPA method 600 / M4-82-020 incorporating visual estimates of identified material percentages. Chain of Custody and analytical results are presented in Appendix C.

During the sampling activities, each suspect ACM was touched by the inspector to determine its friability and observed to determine the physical condition of the material. A friable material is defined as a material that can be crumbled, or reduced to powder by hand pressure. Friability of a material directly relates to a potential of the ACM to release airborne fibers. The more friable the ACM the more likely asbestos fibers will be released. The inspector assessed the suspect ACM according to their physical conditions.

The JJSA inspectors split the bulk samples every 20th sample collected. These were sent to Schneider Laboratories, Inc. for QA/QC.

5.0 FACILITY PHYSICAL DESCRIPTION AND SUMMARY OF SAMPLING RESULTS

5.1 FACILITY PHYSICAL DESCRIPTION

Refer to the attached Facility Description Form for the physical description of the building. Photographs of the facility are provided in Appendix D.

5.2 SUMMARY OF SAMPLING RESULTS

Table 1 included in this section contains a summary of suspect ACM identified by the accredited inspector during this survey.

5.2.1. Material Types

1. Surfacing Materials
No surfacing materials were identified during this survey.

2. Thermal Systems Insulation (TSI)
Two (2) homogeneous area of Thermal Systems Insulation (TSI) were identified.

3. Miscellaneous Materials
Nineteen (19) homogeneous areas of homogeneous materials were identified during this survey.

5.2.2. Identified Asbestos Containing Materials

The following materials were identified to contain asbestos in **Building G**:

- **330 ft.^{2} of 9” x 9” black floor tile and mastic in corps equipment room**
- **700 ft.^{2} of vinyl covering brown in latrine**
- **200 ft.^{2} of 12” x 12” beige floor tile and mastic in latrine**
- **1,500 ft.^{2} of Transite panels in the mechanical room**

- **500 ft. pipe insulation in mechanical room**
- **30 ft.^{2} pipe fittings in mechanical room**
- **800 ft.^{2} of Transite panels in the latrine**

Table 1 contains the summary of sample results.

6.0 CONCLUSIONS

The pipe insulation and fittings found in the mechanical room and roof stacks are classified as friable materials. Transite panels found in the mechanical room contain asbestos and may become a regulated material during the demolition of the structure.

In addition, vinyl floor tiles in various areas of the building were found to contain asbestos. These materials are non-friable and do not require removal prior to wet demolition.

7.0 .... RECOMMENDATIONS

JJSA recommends that the friable pipe insulation, pipe fittings and the Transite panels be removed under abatement procedures before wet demolition of the structure.

Table 1 ASBESTOS SURVEY AND ASSESSMENT

PROJECT NAME: SEPARATE BATTALIONS BARRACKS
ADDRESS: BLDG AT-3551 FORT BRAGG, NORTH CAROLINA
CONTRACT NO.: DACA21-00-D-0001
SURVEY DATE: 9/20/00 JJSA PROJECT NO:00-127A

CONSULTANT: **J. J. SOSA & ASSOCIATES, INC.**
AGENCY: U.S ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT
AGENCY CONTACT PERSON: .

SAMPLE NO.	MATERIAL (TYPE)	HOMOGEN. AREA	SAMPLING LOCATION	QUANTITY	FRIABLE	TYPE & % ASBESTOS	CONDITION	DAMAGE POTENTIAL	COMMENTS
G-1	Wallboard w/joint comp.	HA-01	Computer[1] Y[2]	16,640 ft^2	NO	NAFD	GOOD	LOW	
G-2	Wallboard w/joint comp.	HA-01	Office Y		NO	Traces <1%	GOOD	LOW	See Composite Results Samples G-76 - G-85
G-3	Wallboard w/joint comp.	HA-01	Office S		NO	SNA	GOOD	LOW	See Composite Results Samples G-76 - G-85
G-4	Wallboard w/joint comp.	HA-01	Flt Chief R		NO	NAFD	GOOD	LOW	No Joint compound
G-5	Wallboard w/joint comp.	HA-01	Office H		NO	NAFD	GOOD	LOW	No Joint compound
G-6	Wallboard w/joint comp.	HA-01	Weight Room K		NO	NAFD	GOOD	LOW	No Joint compound
G-7	Wallboard w/joint comp.	HA-01	DOT O		NO	NAFD	GOOD	LOW	No Joint compound
G-8	Wallboard w/joint comp.	HA-01	Latrine C		NO	NAFD	GOOD	LOW	No Joint compound
G-9	Green Sheet Vinyl	HA-02	Hall EE	900 ft^2	NO	NAFD	FAIR	LOW	
G-10	Green Sheet Vinyl	HA-02	Hall EE		NO	NAFD	FAIR	LOW	
G-11	Green Sheet Vinyl	HA-02	Equipment G		NO	NAFD	FAIR	LOW	
G-12	Blown In Insultion	HA-03	Computer Y	4160 ft^2	YES	NAFD	FAIR	LOW	
G-13	Blown In Insultion	HA-03	Office S		YES	NAFD	FAIR	LOW	
G-14	Blown In Insultion	HA-03	Flt Chief R		YES	NAFD	FAIR	LOW	
G-15	Blown In Insultion	HA-03	Flt CC DD		YES	NAFD	FAIR	LOW	
G-16	Blown In Insultion	HA-03	Office X		YES	NAFD	GOOD	LOW	
G-17	2'x4' Ceiling Tile White w/ pinholes and fissures	HA-04	Office S	1040 ft^2	YES	NAFD	GOOD	LOW	
G-18	2'x4' Ceiling Tile White w/ pinholes and fissures	HA-04	Break Room Z		YES	NAFD	GOOD	LOW	
G-19	2'x4' Ceiling Tile White w/ pinholes and fissures	HA-04	1ST Sgt. F		YES	NAFD	GOOD	LOW	
G-20	2'x4' Ceiling Tile White w/ pinholes and fissures	HA-04	Office H		YES	NAFD	GOOD	LOW	
G-21	2'x4' Ceiling Tile White w/ pinholes and fissures	HA-04	1ST Sgt. F		YES	NAFD	GOOD	LOW	
G-22	12"X12" White Floor tile W/Mastic	HA-05	Female Locker Room T	300 ft^2	NO	NAFD	GOOD	HIGH	
G-23	12"X12" White Floor tile W/Mastic	HA-05	Latrine W		NO	NAFD	GOOD	HIGH	
G-24	12"X12" White Floor tile W/Mastic	HA-05	Latrine W		NO	NAFD	GOOD	HIGH	
G-25	**9"X9" Black Floor tile w/Mastic**	**HA-06**	**Corps Equipment G**	**330 ft^2**	**NO**	**11%, 2.1 %, & 1.1% Chrysotile**	**GOOD**	**HIGH**	**Positve Floor tile & Brown/Black Mastics**
G-26	9"X9" Black Floor tile w/Mastic	HA-06	Office S		NO	SNA	GOOD	HIGH	Assumed Positive
G-27	9"X9" Black Floor tile w/Mastic	HA-06	Office S		NO	SNA	GOOD	LOW	Assumed Positive
G-28	**Bathroom Sheet Vinyl Brown**	**HA-07**	**Latrine BB**	**700 FT^2**	**NO**	**Chrysotile 11%**	**GOOD**	**LOW**	**Positive Sheet Vinyl**
G-29	Bathroom Sheet Vinyl Brown	HA-07	Latrine K		NO	SNA	GOOD	LOW	Assumed Positive

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SURVEY DATE: 9/20/00 JJSA PROJECT NO:00-127A

CONSULTANT: **J. J. SOSA & ASSOCIATES, INC.**
AGENCY: U.S ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT
AGENCY CONTACT PERSON: .

SAMPLE NO.	MATERIAL (TYPE)	HOMOGEN. AREA	SAMPLING LOCATION	QUANTITY	FRIABLE	TYPE & % ASBESTOS	CONDITION	DAMAGE POTENTIAL	COMMENTS
G-30	Bathroom Sheet Vinyl Brown	HA-07	Latrine K		NO	SNA	GOOD	LOW	Assumed Positive
G-31	2'X4' Ceiling Tile White w/ fissures and holes	HA-08	DO Q	300 ft^2	YES	NAFD	GOOD	LOW	
G-32	2'X4' Ceiling Tile White w/ fissures and holes	HA-08	CC Office B		YES	NAFD	GOOD	LOW	
G-33	2'X4' Ceiling Tile White w/ fissures and holes	HA-08	CCC L		YES	NAFD	GOOD	LOW	
G-34	**12"X12" Beige Floor tile W/Mastic**	**HA-09**	**Latrine C**	**200 ft^2**	**NO**	**2.7% Chrysotile**	**GOOD**	**HIGH**	**Positive Black Mastic**
G-35	12"X12" Beige Floor tile W/Mastic	HA-09	Latrine C		NO	SNA	GOOD	HIGH	Assumed Positive
G-36	12"X12" Beige Floor tile W/Mastic	HA-09	Latrine C		NO	SNA	GOOD	HIGH	Assumed Positive
G-37	Black Sheet Vinyl	HA-10	Equipment G	200 ft^2	NO	NAFD	GOOD	HIGH	
G-38	Black Sheet Vinyl	HA-10	Equipment G		NO	NAFD	GOOD	HIGH	
G-39	Black Sheet Vinyl	HA-10	Equipment G		NO	NAFD	GOOD	HIGH	
G-40	12"X12" White Floor tile W/Mastic	HA-11	Storage I	200 ft^2	NO	NAFD	GOOD	LOW	
G-41	12"X12" White Floor tile W/Mastic	HA-11	Storage I		NO	NAFD	GOOD	LOW	
G-42	12"X12" White Floor tile W/Mastic	HA-11	Storage I		NO	NAFD	GOOD	LOW	
G-43	**Transite Wall & Ceiling Panels**	**HA-12**	**Mech. Room J**	**1,500 ft^2**	**NO**	**35% Chrysotile**	**GOOD**	**LOW**	**Positive Transite Panel**
G-44	Transite wall & ceiling Panels	HA-12	Mech. Room J		NO	NAFD	GOOD	LOW	
G-45	Transite wall & ceiling Panels	HA-12	Mech. Room J		NO	NAFD	GOOD	LOW	
G-46	**Aircell Pipe TSI**	**HA-13**	**Mech. Room J**	**500 lf**	**YES**	**65% Chrysotile**	**FAIR**	**LOW**	**Positive Grey Aircell**
G-47	Aircell Pipe TSI	HA-13	Mech. Room J		YES	SNA	FAIR	LOW	Assumed Positive
G-48	Aircell Pipe TSI	HA-13	Mech. Room J		YES	SNA	FAIR	LOW	Assumed Positive
G-49	**Pipe Fitting TSI**	**HA-14**	**Mech. Room J**	**30 ft Each**	**YES**	**45% Chrysotile**	**FAIR**	**LOW**	**Positive Insulation Material**
G-50	Pipe Fitting TSI	HA-14	Mech. Room J		YES	SNA	FAIR	LOW	Assumed Positive
G-51	Pipe Fitting TSI	HA-14	Mech. Room J		YES	SNA	FAIR	LOW	Assumed Positive
G-52	Interior Window Caulk	HA-15	Latrine AA	10 lf	YES	NAFD	GOOD	LOW	
G-53	Interior Window Caulk	HA-15	D Main NCO AA		YES	NAFD	GOOD	LOW	
G-54	Interior Window Caulk	HA-15	D Main NCO AA		YES	NAFD	GOOD	LOW	
G-55	Exterior Window Glazing	HA-16	Exterior	3,240 lf	YES	NAFD	FAIR	LOW	
G-56	Exterior Window Glazing	HA-16	Exterior		YES	NAFD	FAIR	LOW	
G-57	Exterior Window Glazing	HA-16	Exterior		YES	NAFD	FAIR	LOW	
G-58	Red Chimney Brick	HA-17	Exterior	300 ft^2	YES	NAFD	GOOD	LOW	
G-59	Red Chimney Brick	HA-17	Exterior		YES	NAFD	GOOD	LOW	

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AGENCY: U.S ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT
AGENCY CONTACT PERSON: .

SAMPLE NO.	MATERIAL (TYPE)	HOMOGEN. AREA	SAMPLING LOCATION	QUANTITY	FRIABLE	TYPE & % ASBESTOS	CONDITION	DAMAGE POTENTIAL	COMMENTS
G-60	Red Chimney Brick	HA-17	Exterior	▼	YES	NAFD	GOOD	LOW	
G-61	Chimney Mortar	HA-18	Exterior	30 ft^2	NO	NAFD	GOOD	LOW	
G-62	Chimney Mortar	HA-18	Exterior	▼	NO	NAFD	GOOD	LOW	
G-63	Chimney Mortar	HA-18	Exterior	▼	NO	NAFD	FAIR	LOW	
G-64	Five Patch Cement	HA-19	Exterior	2 ft^2	NO	NAFD	FAIR	LOW	
G-65	Five Patch Cement	HA-19	Exterior	▼	NO	NAFD	FAIR	LOW	
G-66	Five Patch Cement	HA-19	Exterior	▼	NO	NAFD	GOOD	LOW	
G-67	White Shingle BUR	HA-20	Exterior	3,025 ft^2	NO	NAFD	GOOD	LOW	
G-68	White Shingle BUR	HA-20	Exterior	▼	NO	NAFD	GOOD	LOW	
G-69	White Shingle BUR	HA-20	Exterior	▼	NO	NAFD	GOOD	LOW	
G-70	**Bathroom Transite panels**	**HA-21**	**Latrine C**	**800 ft^2**	**NO**	**37% Chrysotile**	**GOOD**	**HIGH**	**Positive Transite Panels**
G-71	Bathroom Transite panels	HA-21	Latrine W	▼	NO	NAFD	GOOD	HIGH	
G-72	Bathroom Transite panels	HA-21	Latrine Z	▼	NO	NAFD	GOOD	HIGH	
G-73	2'x4' Ceiling Tile White w/ pinholes and fissures	HA-04	Office S	-	YES	NAFD	GOOD	LOW	QA/QC split from Sample # G-17 (4)
G-74	Transite Wall & Ceiling Panels	HA-12	Mech. Room J	-	NO	15% Chrysotile	GOOD	LOW	QA/QC split from Sample # G-43
G-75	Chimney Mortar	HA-18	Exterior	-	NO	NAFD	GOOD	LOW	QA/QC split from Sample # G-61
G-76	Wallboard System	HA-1	Office V	16,640 sf	NO	NAFD	GOOD	LOW	
G-77	Wallboard System	HA-1	Office V	▼	NO	Chrysotile Trace	GOOD	LOW	Composite <1%
G-78	Wallboard System	HA-1	Office V	▼	NO	Chrysotile Trace	GOOD	LOW	Composite <1%
G-79	Wallboard System	HA-1	Female Locker Room T	▼	NO	Chrysotile Trace	GOOD	LOW	Composite <1%
G-80	Wallboard System	HA-1	Office S	▼	NO	Chrysotile Trace	GOOD	LOW	Composite <1%
G-81	Wallboard System	HA-1	FLT Office R	▼	NO	Chrysotile Trace	GOOD	LOW	Composite <1%
G-82	Wallboard System	HA-1	Hall West EE	▼	NO	Chrysotile Trace	GOOD	LOW	Composite <1%
G-83	Wallboard System	HA-1	Hall West E	▼	NO	Chrysotile 0.25%	GOOD	LOW	Composite <1%
G-84	Wallboard System	HA-1	Lobby West E	▼	NO	Chrysotile Trace	GOOD	LOW	Composite <1%
G-85	Wallboard System	HA-1	1st Fl. Stairwell M	▼	NO	Chrysotile Trace	GOOD	LOW	Composite <1%

COMMENTS/ NOTES:
NAFD - No Asbestos Fiber Detected
Good - Materials with No Damage .
***** See Additional wallboard system samples results G-76 thru G-85.
Fair - Material with Localized Damaged (less than 10%).
lf - Linear Feet
ft^2 - Square Feet
BUR - Build up Roof
TSI - Thermal System Insulation
Mech. Room[(1)] - Functional Space - Name of the room as identified in the building by use or designation.
B[(2)] - Letter designation given arbitrarily to each space in the building. Starting with the letter "A" at one corner of the building and progressing clockwise throughout the entire facility.

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ADDRESS: BLDG AT-3551 FORT BRAGG, NORTH CAROLINA	AGENCY: U.S ARMY CORPS OF ENGINEERS
CONTRACT NO.: DACA21-00-D-0001	SAVANNAH DISTRICT
SURVEY DATE: 9/20/00 JJSA PROJECT NO:00-127A	AGENCY CONTACT PERSON: .

SAMPLE NO.	MATERIAL (TYPE)	HOMOGEN. AREA	SAMPLING LOCATION	QUANTITY	FRIABLE	TYPE & % ASBESTOS	CONDITION	DAMAGE POTENTIAL	COMMENTS

(3)-Composite results provided in IATL's Quality Control Report dated Oct. 24, 2000

(4)-QA/QC Samples were analyzed by Schneider Laboratories. A copy of the report is included in appendix B.

The above materials, locations and quantities are approximate and general representations of the work involved. Specific references to the materials, locations, quantities and intent of the removal activities are to be outlined during a contractor's walk-through of the facility with the owner and/or consultant.

APPENDIX A

FIELD DRAWINGS & SAMPLING LOCATIONS

(SEE CONTRACT DRAWINGS)

APPENDIX B

LABORATORY RESULTS CHAIN OF CUSTODY SAMPLING FORMS

The American Industrial Hygiene Association

is proud to acknowledge that

International Asbestos Testing Lab

Mt. Laurel, NJ

has fulfilled the requirements for and has been formally recognized by AIHA and is technically competent to perform the analyses listed in the following

SCOPE OF ACCREDITATION

INDUSTRIAL HYGIENE Originally Accredited: 03/01/97		ENVIRONMENTAL LEAD Originally Accredited: 01/20/97		ENVIRONMENTAL MICROBIOLOGY
X Metals	___Silica	X Paint Chips	X Air	___Bacteria
X Asbestos PCM	X Asbestos PLM	X Dust Wipes	X Soil	___Fungi
___Organic Solvents	___Diffusive Samples			

The above named laboratory agrees to perform all analyses listed above in the scope of accreditation according to applicable policy requirements and acknowledges that continued accreditation is dependent on successful participation in the appropriate proficiency testing programs. This laboratory may be contacted to verify the current scope of accreditation, proficiency testing performance and accreditation status. Accreditation by AIHA is not a guarantee of the validity of the data generated by the laboratory.

Laboratory # 100188
Certificate # 644

Accreditation Expires: 01/20/03

Colleen Becker
Colleen Becker
Chair, Analytical Accreditation Board

James R. Thornton
James R. Thornton, CIH, CSP
President, AIHA

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation

INTERNATIONAL ASBESTOS TESTING LABORATORY

MT. LAUREL, NJ

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

AIRBORNE ASBESTOS FIBER ANALYSIS

June 30, 2001
Effective through

David E. Alderman
For the National Institute of Standards and Technology

NVLAP Lab Code: 101165-0

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation

DEPARTMENT OF COMMERCE * UNITED STATES OF AMERICA *

INTERNATIONAL ASBESTOS TESTING LABORATORY

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BULK ASBESTOS FIBER ANALYSIS

June 30, 2001
Effective through

David F. Alderman
For the National Institute of Standards and Technology

NVLAP Lab Code: 101165-0

APPENDIX C

PERSONNEL CERTIFICATIONS

North Carolina
Department of Health and Human Services
Division of Public Health
2728 Capital Boulevard • 1912 Mail Service Center • Raleigh, North Carolina 27699-1912 • Courier 56-32-00
Ann F. Wolfe, M.D., M.P.H., Director

September 12, 2000

Rodney Carrero-Santana
16347 SW 83 Lane
Miami, FL 33193

Dear Mr. Carrero-Santana:

Based upon the review of your accreditation application, the Health Hazards Control Unit (HHCU) has determined that you have fulfilled the requirements and are eligible for asbestos accreditation as a(n) INSPECTOR. Your assigned North Carolina accreditation number is 11974, which is reflected on your enclosed North Carolina Accreditation card. Please be sure to take this card with you to any asbestos work site where you are employed. The State requires that all persons conducting asbestos abatement or asbestos management activities be accredited and have their identification card on site.

Your North Carolina Inspector accreditation will expire on MAY 31, 2001. It is NOT the policy of the HHCU to issue renewal notices. If you wish to continue working as a(n) Inspector after this expiration date, you must successfully complete the required training and submit a completed application to this office prior to May 31, 2001. If you should continue to perform asbestos management activities as a(n) Inspector without a valid North Carolina accreditation, you will be in violation of State regulations and may be cited for noncompliance.

Sincerely,

John J. "Pat" Curran, CIH
Manager
Health Hazards Control Unit
Occupational & Environmental Epidemiology Branch
(919) 733-0820

Enclosure

Mark L Fohn
6906 Mirror Lake Ave
Tampa, FL 33634

NORTH CAROLINA
ASBESTOS ACCREDITATION

SSN		EXPIRATION	
123-64-7738		05-31-2001	
DOB	SEX	HT	WT
12-18-1964	M	5'11"	235
CLASS		#	EXP
INSPECTOR		11991	05-01

North Carolina
Department of Health and Human Services
Division of Public Health
2728 Capital Boulevard • 1912 Mail Service Center • Raleigh, North Carolina 27699-1912 • Courier 56-32-00
Ann F. Wolfe, M.D., M.P.H., Director

November 13, 2000

Mark L Fohn
6906 Mirror Lake Ave
Tampa, FL 33634

Dear Mr. Fohn:

Based upon the review of your accreditation application, the Health Hazards Control Unit (HHCU) has determined that you have fulfilled the requirements and are eligible for asbestos accreditation as a(n) INSPECTOR. Your assigned North Carolina accreditation number is 11991, which is reflected on your enclosed North Carolina Accreditation card. Please be sure to take this card with you to any asbestos work site where you are employed. The State requires that all persons conducting asbestos abatement or asbestos management activities be accredited and have their identification card on site.

Your North Carolina Inspector accreditation will expire on MAY 31, 2001. It is NOT the policy of the HHCU to issue renewal notices. If you wish to continue working as a(n) Inspector after this expiration date, you must successfully complete the required training and submit a completed application to this office prior to May 31, 2001. If you should continue to perform asbestos management activities as a(n) Inspector without a valid North Carolina accreditation, you will be in violation of State regulations and may be cited for noncompliance.

Sincerely,

John J. "Pat" Curran, CIH
Manager
Health Hazards Control Unit
Occupational & Environmental Epidemiology Branch
(919) 733-0820

Enclosure

APPENDIX D

PROJECT PHOTOS

Photo #1
Front of Bldg. AT 3551 (G)

Photo #2
Side view of Building AT 3551 (G)

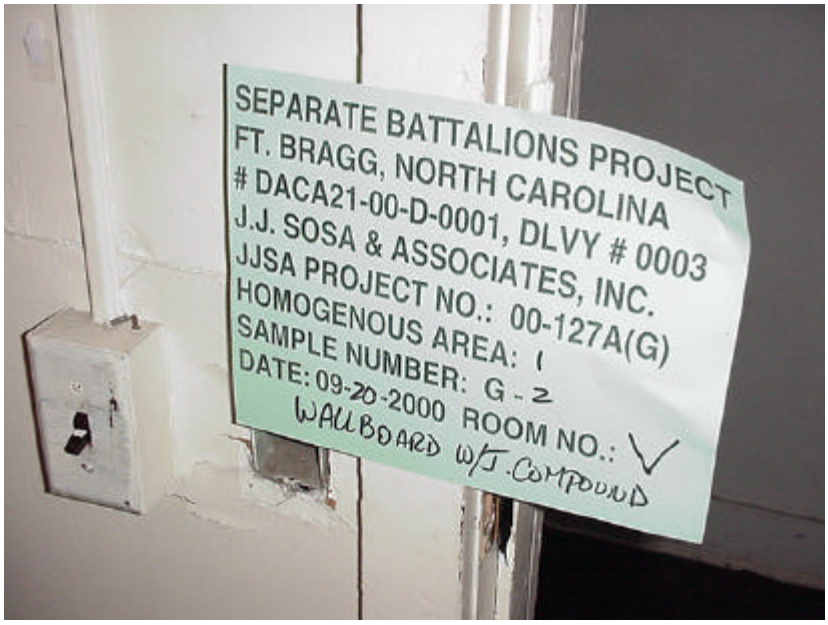

Photo # 3
Wallboard and Joint Compound
Joint Compound 3.5% Chrysotile

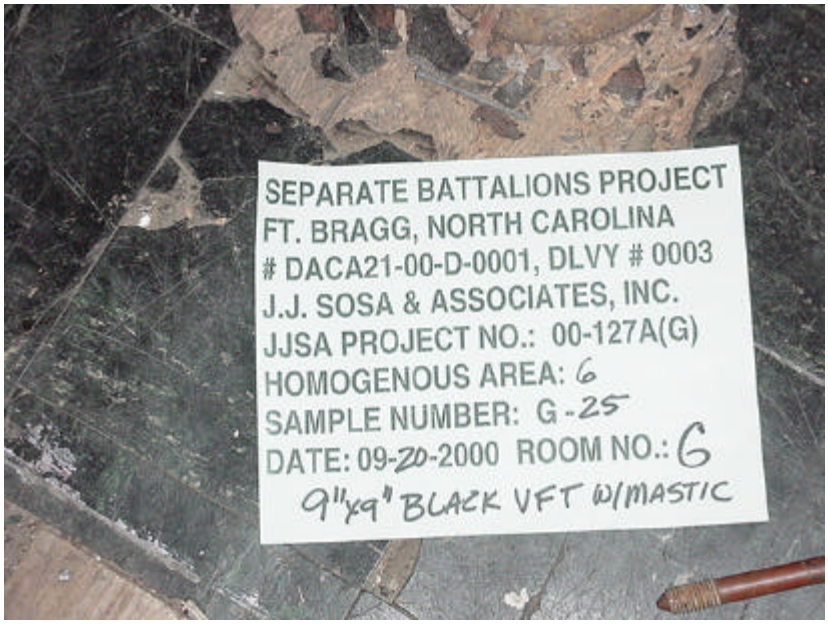

Photo # 4
9x9 Black Floor Tile and Mastic
Tile 6.5% Chrysotile
Mastic 2.1% Chrysotile

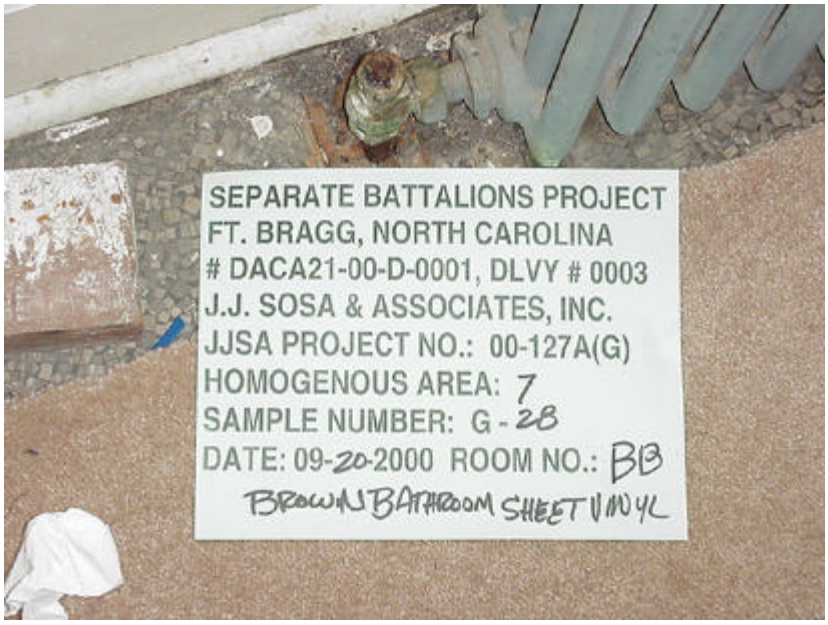

Photo #5
Brown Sheet Vinyl
11% Chrysotile

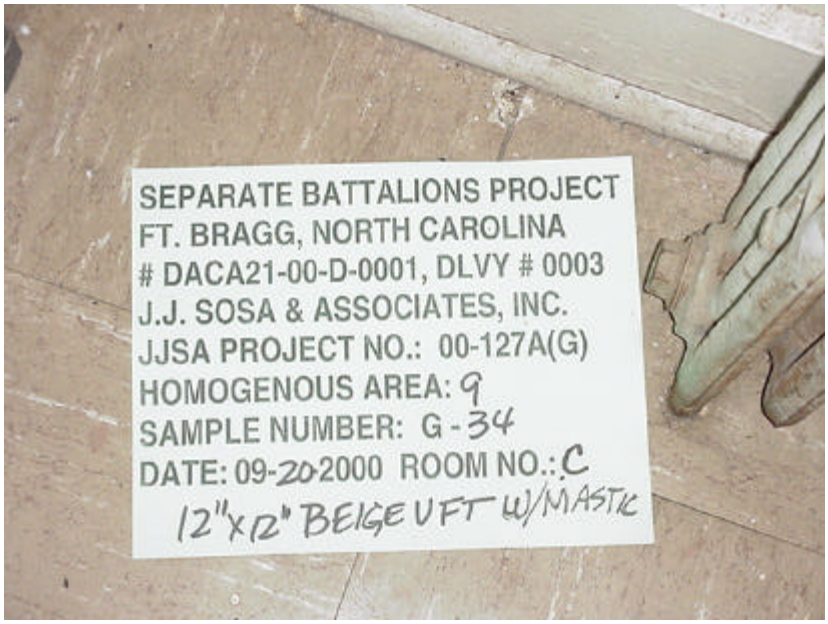

Photo # 6
12x12 Beige Floor Tile and Mastic
Black Mastic 2.7% Chrysotile

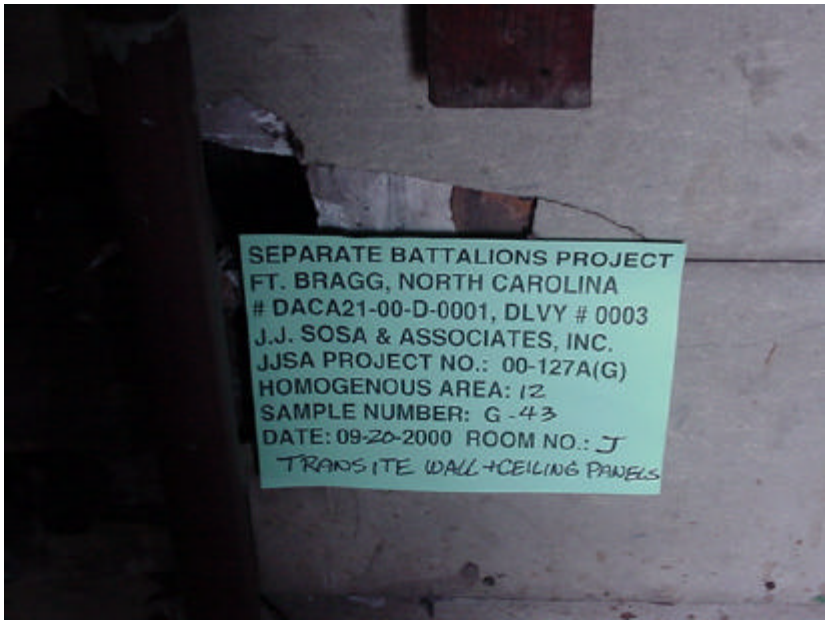

Photo # 7
Transite Walls and Ceilings
35% Chrysotile

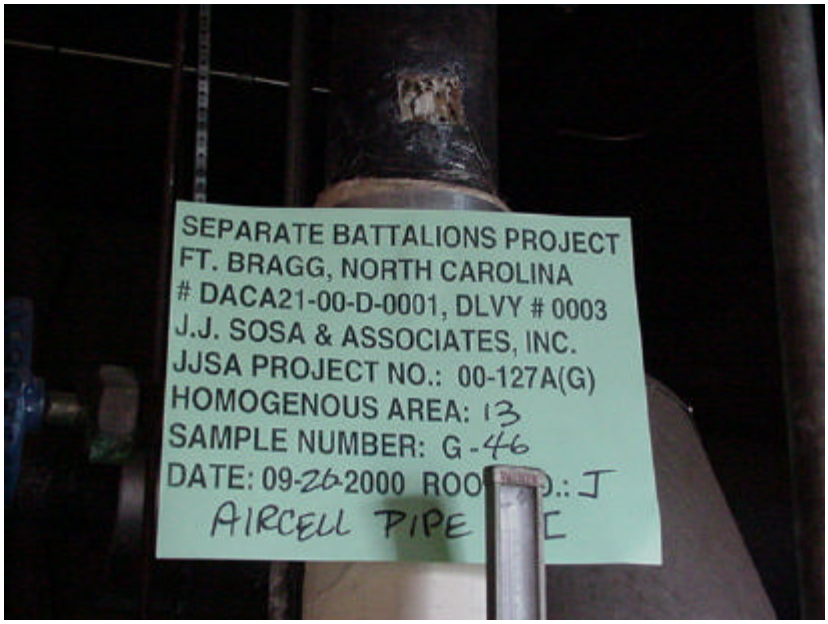

Photo # 8
Grey Aircell Pipe TSI
65% Chrysotile

Photo # 9
White Aircell Pipe TSI
45% Chrysotile

Photo # 10
Bathroom Transite Panels
37% Chrysotile

BUILDING I-AT 3949
ASBESTOS (ACM) SURVEY
REPORT

SEPARATE BATTALIONS BARRACKS PROJECT
FORT BRAGG, NORTH CAROLINA

DACA21-00-D-0001
DELIVERY ORDER-0003

Submitted To

Department of the Army
Savannah District, Corps of Engineers
P.O. Box 889
Savannah, Georgia 31402-0889

Submitted By

J.J. Sosa & Associates, Inc.
5811 Memorial Hwy., Suite 207
Tampa, Florida 33615-5000
(813) 888-6525
(813) 881-1285 (Fax)

October 30, 2000

TABLE OF CONTENTS

SECTION **PAGE**

APPENDICES

EXECUTIVE SUMMARY

J.J. Sosa & Associates, Inc. was retained by the U.S. Army Corps of Engineers (COE) Savannah District to perform asbestos surveys for the Separate Battalions CAB at Fort Braggs, North Carolina. The surveys of Asbestos-Containing Materials (ACM) were performed at several buildings located in the area "A" on the main post. Copy of a site location map is included in this report. The buildings surveyed are to be demolished. This report contains the findings of the survey performed in **Building No. I-AT3949**. The JJSA inspectors designated the structure for the purpose of the survey as **Building I**.

This effort consisted of review of existing building documentation, a walkthrough and visual inspection to identify and sample suspect ACM existing in the structures. Laboratory analysis was performed on all suspect ACM, including non-friable and suspect materials that may become regulated during demolition activities. A sample location plan illustrating the areas surveyed is provided in Appendix A.

During the survey of **Building I-AT3949** a total of **eighteen (18)** homogeneous areas were identified and sampled. A minimum of three (3) samples were collected from each homogeneous area and analyzed to determine whether they were below the regulatory threshold of 1% asbestos. Samples were given a unique alphanumeric identification (i.e. A-1, A-2, etc.). The letter represents the building designation provided by the inspectors to each building followed by a number starting with "1" increasing sequentially with the last number representing the total number of samples collected for the building.

The following materials were identified to contain asbestos in **Building I**:

- **20 ft.^{2} vibration damping cloth in mechanical room**

- **10 ft. exhaust gasket in mechanical room**

1.0 INTRODUCTION

JJSA personnel conducted an asbestos survey at **Building I-AT3949** on **September 17, 2000**. This report contains the findings of the Asbestos Survey in accordance with the scope of work provided by the COE Savannah District.

2.0 REGULATORY REVIEW AND PERSONNEL QUALIFICATIONS

2.1 REGULATORY REVIEW

Asbestos-related activities, such as demolition, O&M and abatement, are controlled by many federal and state regulations including those of the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA). OSHA has promulgated standards for permissible airborne fiber exposure limits and requirements for worker protection during abatement and management of ACM. The EPA regulations were signed into law to protect the building occupants and the environment. Highlights of key regulations are as follows:

A. EPA Regulations:

National Emissions Standards For Hazardous Air Pollutants (NESHAP) (40 CFR 61)

This rule provides guidelines for renovation and demolition notification, removal and disposal of ACM. Also included in the NESHAP are rules concerning manufacturing, spraying and fabrication of asbestos.

Asbestos Hazard Emergency Response Act (AHERA) (40 CFR 763, Subpart E)

The Asbestos Hazard Emergency Response Act (AHERA) was enacted to control the exposure of school children, teachers and custodial personnel to airborne asbestos fibers at their facilities. AHERA requires the identification, sampling, assessment and remediation/responses of identified ACM at schools kindergarten through 12th grade. AHERA was revised to require that all personnel conducting asbestos investigations in schools as well as commercial buildings be trained and certified according to the regulation.

EPA Worker Protection Rule (40 CFR 763.120,121)

This rule extends worker coverage to state and local employees who perform asbestos work and who are not covered by the OSHA Asbestos Standards or by a state OSHA Plan. Requirements include medical examinations, air monitoring and reporting, protective equipment, work practices and record keeping.

B. OSHA Regulations:

29 CFR 1926.1101: Construction Industry Standard

This standard covers employees engaged in demolition, construction, and response actions such as removal, encapsulation, alteration, repair, maintenance, insulation, spill/emergency clean-up, disposal and storage of ACM.

29 CFR 1910.1001; General Industry Standard

This standard controls the occupational exposures in general industry.

29 CFR 1910.134; Use of Respirators

The OSHA Respiratory Protection Rule defines the program and requirements as to when personnel are required and / or allowed to wear respirators. In general this OSHA coverage extends to all private sector employers and employees. Those not covered under the standard typically include self-employed persons and federal, state and local municipal employees.

State of North Carolina

In the State of North Carolina, any person who conducts asbestos work must be certified by the North Carolina Department of health and Human Services as provided in T15A: 19C.0600.

2.2 PERSONNEL QUALIFICATION

The survey fieldwork was performed on **September 17, 2000** by JJSA's representatives Mark Fohn and Rodney Carrero, PE under the direct supervision of Jose J. Sosa, PE, CIH. Mr. Sosa is a Certified Industrial Hygienist and a Professional Engineer. Mr. Carrero holds a current AHERA building inspection certificate from the State of North Carolina. Copy of the certificate and CIH certification is provided in

Appendix B.

3.0 SURVEY PROTOCOL

The survey was conducted using state-of-the-art protocol for sampling materials suspected of containing asbestos as indicated by the U.S. Environmental Protection Agency.

The survey involved a site inspection (visual walk-through) and identification of suspect ACM located in the building. An inventory of all accessible and / or exposed suspect ACM was conducted to determine all homogeneous materials inside and outside the building.

3.1 INACCESSIBLE AREAS NOT SURVEYED

An attempt was made by the inspector to reach all areas inside the building. However, if suspect materials are discovered during demolition in concealed spaces, demolition activities should stop and the materials sampled and analyzed.

3.2 MATERIALS NOT SAMPLED

There were no limitations noted during this asbestos survey. Bulk samples were collected from materials without concern for destruction to the structure or aesthetic damage since the building is schedule to be demolished. All suspect materials were given appropriate consideration. Likewise, materials visibly and completely identifiable as non-asbestos (fiberglass, foam rubber, wood, etc.,) were not sampled.

4.0 SAMPLING PROCEDURE

The technique used for sampling the suspected materials was designed to minimize possible fiber release and in turn possible contamination of surrounding areas. All representative "suspect" materials sampled, were collected in accordance with the EPA's AHERA and "Guidance for Controlling Asbestos Containing Material in Buildings" (EPA 560 / 6-85-024, June 1985).

The sample location was sprayed with an amended soapy water mixture. Then, a core sample of the material was collected and properly stored in labeled airtight bag. A chain of custody form was completed for all bulk samples collected and subsequently delivered to IATL Laboratories for analysis using Polarized Light Microscopy (PLM). IATL Laboratories utilizes dispersion staining techniques according to US EPA method 600 / M4-82-020 incorporating visual estimates of identified material percentages. Chain of Custody and

analytical results are presented in Appendix C.

During the sampling activities, each suspect ACM was touched by the inspector to determine its friability and observed to determine the physical condition of the material. A friable material is defined as a material that can be crumbled, or reduced to powder by hand pressure. Friability of a material directly relates to a potential of the ACM to release airborne fibers. The more friable the ACM the more likely asbestos fibers will be released. The inspector assessed the suspect ACM according to their physical conditions.

The JJSA inspectors split the bulk samples every 20th sample collected. These samples were sent to Schneider Laboratories, Inc. for QA/QC.

5.0 FACILITY PHYSICAL DESCRIPTION AND SUMMARY OF SAMPLING RESULTS

5.1 FACILITY PHYSICAL DESCRIPTION

Refer to the Facility Description Form for the physical description of the building. Photographs of the facility are provided in Appendix D

5.2 SUMMARY OF SAMPLING RESULTS

Table 1 included in this section contains a summary of suspect ACM identified and sampled by the accredited inspector during this survey.

5.2.1. Material Types

1. Surfacing Materials
No surfacing materials were identified during this survey.

2. Thermal Systems Insulation (TSI)
No Thermal Systems Insulation (TSI) was identified during this survey.

3. Miscellaneous Materials
Eighteen (18) homogeneous areas of homogeneous materials were identified during this survey.

5.2.2. Identified Asbestos Containing Materials

The following materials sampled at **Building I-AT3949**, were identified by Polarized Light Microscopy (PLM) analyses to contain asbestos in amounts of 1% or greater. A summary of the analytical results oft the materials tested are provided in Table 1.

- **20 ft.^{2} of vibration damping cloth in mechanical room**
- **10 ft. exhaust gasket in mechanical room**

6.0 CONCLUSIONS

The vibration damping cloth found in the mechanical room and gasket are classified as friable materials.

7.0 .....RECOMMENDATIONS

JJSA recommends that the friable vibration damping cloth and gasket be removed under abatement procedures before wet demolition of the structure.

Table 1 ASBESTOS SURVEY AND ASSESSMENT

PROJECT NAME: SEPARATE BATTALIONS BARRACKS
ADDRESS: BLDG AT-3949 FORT BRAGG, NORTH CAROLINA
CONTRACT NO.: DACA21-00-D-0001
SURVEY DATE: 9/17/00 JJSA PROJECT NO.:00127A

CONSULTANT: **J. J. SOSA & ASSOCIATES, INC.**
AGENCY: U.S ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT
AGENCY CONTACT PERSON:

SAMPLE NO.	MATERIAL (TYPE)	HOMOGEN. AREA	SAMPLING LOCATION	QUANTITY	FRIABLE	TYPE & % ASBESTOS	CONDITION	DAMAGE POTENTIAL	COMMENTS
I-1	Exterior Window Caulk	HA-01	Exterior	900 lf	NO	NAFD	GOOD	LOW	
I-2	Exterior Window Caulk	HA-01	Exterior		NO	NAFD	GOOD	LOW	
I-3	Exterior Window Caulk	HA-01	Exterior		NO	NAFD	GOOD	LOW	
I-4	Exterior Wall Caulk	HA-02	Exterior	10 lf	NO	NAFD	GOOD	LOW	
I-5	Exterior Wall Caulk	HA-02	Exterior		NO	NAFD	GOOD	LOW	
I-6	Exterior Wall Caulk	HA-02	Exterior		NO	NAFD	GOOD	LOW	
I-7	Red Chimney Brick	HA-03	Exterior	300 ft^2	NO	NAFD	GOOD	LOW	
I-8	Red Chimney Brick	HA-03	Exterior		NO	NAFD	GOOD	LOW	
I-9	Red Chimney Brick	HA-03	Exterior		NO	NAFD	GOOD	LOW	
I-10	Chimney Mortar	HA-04	Exterior	30 ft^2	NO	NAFD	GOOD	LOW	
I-11	Chimney Mortar	HA-04	Exterior		NO	NAFD	GOOD	LOW	
I-12	Chimney Mortar	HA-04	Exterior		NO	NAFD	GOOD	LOW	
I-13	Flue Cement Patch	HA-05	Exterior	2 ft^2	NO	NAFD	GOOD	LOW	
I-14	Flue Cement Patch	HA-05	Exterior		NO	NAFD	GOOD	LOW	
I-15	Flue Cement Patch	HA-05	Exterior		NO	NAFD	GOOD	LOW	
I-16	White Shingle BUR	HA-06	Roof	4,140 ft^2	NO	NAFD	GOOD	LOW	
I-17	White Shingle BUR	HA-06	Roof		NO	NAFD	GOOD	LOW	
I-18	White Shingle BUR	HA-06	Roof		NO	NAFD	GOOD	LOW	
I-19	Exterior Door Caulk	HA-07	Exterior	120 lf	NO	NAFD	GOOD	LOW	
I-20	Exterior Door Caulk	HA-07	Exterior		NO	NAFD	GOOD	LOW	
I-21	Exterior Door Caulk	HA-07	Exterior		NO	NAFD	GOOD	LOW	
I-22	Beige Vinyl Sheet	HA-08	Womens Bathroom[1] Q[2]	144 ft^2	NO	NAFD	GOOD	HIGH	
I-23	Beige Vinyl Sheet	HA-08	Womens Bathroom Q		NO	NAFD	GOOD	HIGH	
I-24	Beige Vinyl Sheet	HA-08	Mens Bathroom I		NO	NAFD	GOOD	HIGH	
I-25	Green Vinyl Sheet	HA-09	Work Area M	8,000 ft^2	NO	NAFD	GOOD	HIGH	
I-26	Green Vinyl Sheet	HA-09	Work Area M		NO	NAFD	GOOD	HIGH	
I-27	Green Vinyl Sheet	HA-09	Work Area C		NO	NAFD	GOOD	HIGH	
I-28	Wallboard/Joint Compound	HA-10	Office O	32,500 ft^2	NO	Trace Chysotile <1%	GOOD	LOW	Chrysotile Trace Joint Compound
I-29	Wallboard/Joint Compound	HA-10	Work Area M		NO	Trace Chysotile <1%	GOOD	LOW	Chrysotile Trace Joint Compound
I-30	Wallboard/Joint Compound	HA-10	Work Area M		NO	NAFD	GOOD	LOW	
I-31	Wallboard/Joint Compound	HA-10	Stairs D		NO	NAFD	GOOD	LOW	
I-32	Wallboard/Joint Compound	HA-10	Work Area S		NO	NAFD	GOOD	LOW	

Table 1 ASBESTOS SURVEY AND ASSESSMENT

PROJECT NAME: SEPARATE BATTALIONS BARRACKS
ADDRESS: BLDG AT-3949 FORT BRAGG, NORTH CAROLINA
CONTRACT NO.: DACA21-00-D-0001
SURVEY DATE: 9/17/00 JJSA PROJECT NO.:00127A

CONSULTANT: **J. J. SOSA & ASSOCIATES, INC.**
AGENCY: U.S ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT
AGENCY CONTACT PERSON:

SAMPLE NO.	MATERIAL (TYPE)	HOMOGEN. AREA	SAMPLING LOCATION	QUANTITY	FRIABLE	TYPE & % ASBESTOS	CONDITION	DAMAGE POTENTIAL	COMMENTS
I-33	Wallboard/Joint Compound	HA-10	Work Area C		NO	NAFD	GOOD	LOW	
I-34	Wallboard/Joint Compound	HA-10	Stairs D		NO	NAFD	GOOD	LOW	
I-35	Wallboard/Joint Compound	HA-10	Office A		NO	NAFD	GOOD	LOW	
I-36	Wallboard/Joint Compound	HA-10	Work Area F		NO	1.5% Chrysotile	GOOD	LOW	Chrysotile Trace Joint Compound
I-37	2'x2' Random Fissure/Ceiling tile	HA-11	Work Area R	4,360 ft^2	YES	NAFD	GOOD	LOW	
I-38	2'x2' Random Fissure/Ceiling tile	HA-11	Office K		YES	NAFD	GOOD	LOW	
I-39	2'x2' Random Fissure/Ceiling tile	HA-11	Office A		YES	NAFD	GOOD	LOW	
I-40	2'x4' Random Fissure/Ceiling tile	HA-12	Storage T	280 ft^2	YES	NAFD	GOOD	LOW	
I-41	2'x4' Random Fissure/Ceiling tile	HA-12	Storage T		YES	NAFD	GOOD	LOW	
I-42	2'x4' Random Fissure/Ceiling tile	HA-12	Storage T		YES	NAFD	GOOD	LOW	
I-43	Exterior Door Caulk	HA-07	Exterior	-	NO	NAFD	GOOD	LOW	QA/QC splt from Sample # I-19
I-44	2x4 Random Fissure/Ceiling tile	HA-12	Storage T	-	YES	NAFD	GOOD	LOW	QA/QC split from Sample # 40
I-45	Interior Door Caulk	HA-13	Work Area M	128 lf	NO	NAFD	GOOD	LOW	
I-46	Interior Door Caulk	HA-13	Work Area F		NO	NAFD	GOOD	LOW	
I-47	Interior Door Caulk	HA-13	Hallway L		NO	NAFD	GOOD	LOW	
I-48	Bathroom Caulk	HA-14	Womens Bathroom Q	60 lf	NO	NAFD	GOOD	LOW	
I-49	Bathroom Caulk	HA-14	Mens Bathroom I		NO	NAFD	GOOD	LOW	
I-50	Bathroom Caulk	HA-14	Mens Bathroom I		NO	NAFD	GOOD	LOW	
I-51	**Transite Panels**	**HA-15**	**Mechanical Room B**	**1,036 ft^2**	**NO**	**25% Chrysotile**	**FAIR**	**LOW**	**Positive Transite Board**
I-52	Transite Panels	HA-15	Mechanical Room B		NO	SNA	FAIR	LOW	**Assumed Positive**
I-53	Transite Panels	HA-15	Mechanical Room[1] B[2]		NO	SNA	FAIR	LOW	"
I-54	**Vibration Damper**	**HA-16**	**Mechanical Room B**	**20 ft^2**	**NO**	**50% Chrysotile**	**FAIR**	**LOW**	**Positive Vibration Damper Cloth**
I-55	Vibration Damper	HA-16	Mechanical Room B		NO	SNA	FAIR	LOW	**Assumed Positive**
I-56	Vibration Damper	HA-16	Mechanical Room B		NO	SNA	FAIR	LOW	"
I-57	**Exhaust Gasket**	**HA-17**	**Mechanical Room B**	**10 lf**	**NO**	**60% Chrysotile**	**FAIR**	**LOW**	**Positive Gasket Material**
I-58	Exhaust Gasket	HA-17	Mechanical Room B		NO	SNA	FAIR	LOW	**Assumed Positive**
I-59	Exhaust Gasket	HA-17	Mechanical Room B		NO	SNA	FAIR	LOW	"
I-60	4" Pipe TSI	HA-18	Mechanical Room B	30 lf	NO	NAFD	GOOD	LOW	

Table 1 ASBESTOS SURVEY AND ASSESSMENT

PROJECT NAME: SEPARATE BATTALIONS BARRACKS
ADDRESS: BLDG AT-3949 FORT BRAGG, NORTH CAROLINA
CONTRACT NO.: DACA21-00-D-0001
SURVEY DATE: 9/17/00 JJSA PROJECT NO.:00127A

CONSULTANT: **J. J. SOSA & ASSOCIATES, INC.**
AGENCY: U.S ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT
AGENCY CONTACT PERSON:

SAMPLE NO.	MATERIAL (TYPE)	HOMOGEN. AREA	SAMPLING LOCATION	QUANTITY	FRIABLE	TYPE & % ASBESTOS	CONDITION	DAMAGE POTENTIAL	COMMENTS
I-61	4" Pipe TSI	HA-18	Mechanical Room B		NO	NAFD	GOOD	LOW	
I-62	4" Pipe TSI	HA-18	Mechanical Room B	▼	NO	NAFD	GOOD	LOW	
I-63	4" Pipe TSI	HA-18	Mechanical Room B	-	NO	NAFD	GOOD	LOW	QA/QC split from Sample # I-60

COMMENTS/ NOTES:
NAFD - NO ASBESTOS FIBER DETECTED
Good - Materials with No Damage .
Fair - Material with Localized Damaged (less than 10%).
SNA - Sample Not Analized
lf - Linear Feet
ft^2 - Square Feet
BUR - Build up Roof
TSI - thermal System Insulation
Mech. Room(1) - Functional Space - Name of the room as identified in the building by use or designation.
B(2) - Letter designation given arbitrarily to each space in the building. Starting with the letter "A" at one corner of the building and progressing clockwise throughout the entire facility..
The above materials, locations and quantities are approximate and general representations of the work involved. Specific references to the materials, locations, quantities and intent of the removal activities are to be outlined during a contractor's walk-through of the facility with the owner and/or consultant.

APPENDIX A

FIELD DRAWINGS & SAMPLING LOCATIONS

(SEE CONTRACT DRAWINGS)

APPENDIX B

LABORATORY RESULTS CHAIN OF CUSTODY SAMPLING FORMS

The American Industrial Hygiene Association

is proud to acknowledge that

International Asbestos Testing Lab

Mt. Laurel, NJ

has fulfilled the requirements for and has been formally recognized by AIHA and is technically competent to perform the analyses listed in the following

SCOPE OF ACCREDITATION

INDUSTRIAL HYGIENE Originally Accredited: 03/01/97		ENVIRONMENTAL LEAD Originally Accredited: 01/20/97		ENVIRONMENTAL MICROBIOLOGY
X Metals	___Silica	X Paint Chips	X Air	___Bacteria
X Asbestos PCM	X Asbestos PLM	X Dust Wipes	X Soil	___Fungi
___Organic Solvents	___Diffusive Samples			

The above named laboratory agrees to perform all analyses listed above in the scope of accreditation according to applicable policy requirements and acknowledges that continued accreditation is dependent on successful participation in the appropriate proficiency testing programs. This laboratory may be contacted to verify the current scope of accreditation, proficiency testing performance and accreditation status. Accreditation by AIHA is not a guarantee of the validity of the data generated by the laboratory.

Laboratory # 100188
Certificate # 644

Accreditation Expires: 01/20/03

Colleen Becker
Colleen Becker
Chair, Analytical Accreditation Board

James R. Thornton
James R. Thornton, CIH, CSP
President, AIHA

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation

INTERNATIONAL ASBESTOS TESTING LABORATORY

MT. LAUREL, NJ

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

AIRBORNE ASBESTOS FIBER ANALYSIS

June 30, 2001
Effective through

David E. Alderman
For the National Institute of Standards and Technology

NVLAP Lab Code: 101165-0

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation

DEPARTMENT OF COMMERCE * UNITED STATES OF AMERICA *

INTERNATIONAL ASBESTOS TESTING LABORATORY

MT. LAUREL, NJ

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

BULK ASBESTOS FIBER ANALYSIS

June 30, 2001
Effective through

David F. Alderman
For the National Institute of Standards and Technology

NVLAP Lab Code: 101165-0

APPENDIX C

PERSONNEL CERTIFICATIONS

North Carolina
Department of Health and Human Services
Division of Public Health
2728 Capital Boulevard • 1912 Mail Service Center • Raleigh, North Carolina 27699-1912 • Courier 56-32-00
Ann F. Wolfe, M.D., M.P.H., Director

September 12, 2000

Rodney Carrero-Santana
16347 SW 83 Lane
Miami, FL 33193

Dear Mr. Carrero-Santana:

Based upon the review of your accreditation application, the Health Hazards Control Unit (HHCU) has determined that you have fulfilled the requirements and are eligible for asbestos accreditation as a(n) INSPECTOR. Your assigned North Carolina accreditation number is 11974, which is reflected on your enclosed North Carolina Accreditation card. Please be sure to take this card with you to any asbestos work site where you are employed. The State requires that all persons conducting asbestos abatement or asbestos management activities be accredited and have their identification card on site.

Your North Carolina Inspector accreditation will expire on MAY 31, 2001. It is NOT the policy of the HHCU to issue renewal notices. If you wish to continue working as a(n) Inspector after this expiration date, you must successfully complete the required training and submit a completed application to this office prior to May 31, 2001. If you should continue to perform asbestos management activities as a(n) Inspector without a valid North Carolina accreditation, you will be in violation of State regulations and may be cited for noncompliance.

Sincerely,

John J. "Pat" Curran, CIH
Manager
Health Hazards Control Unit
Occupational & Environmental Epidemiology Branch
(919) 733-0820

Enclosure

Mark L Fohn
6906 Mirror Lake Ave
Tampa, FL 33634

NORTH CAROLINA
ASBESTOS ACCREDITATION

SSN		EXPIRATION	
123-64-7738		05-31-2001	
DOB	SEX	HT	WT
12-18-1964	M	5'11"	235
CLASS		#	EXP
INSPECTOR		11991	05-01

North Carolina
Department of Health and Human Services
Division of Public Health
2728 Capital Boulevard • 1912 Mail Service Center • Raleigh, North Carolina 27699-1912 • Courier 56-32-00
Ann F. Wolfe, M.D., M.P.H., Director

November 13, 2000

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6906 Mirror Lake Ave
Tampa, FL 33634

Dear Mr. Fohn:

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John J. "Pat" Curran, CIH
Manager
Health Hazards Control Unit
Occupational & Environmental Epidemiology Branch
(919) 733-0820

Enclosure

APPENDIX D

PROJECT PHOTOS

Photo #1
Front of Bldg. AT 3949 (I)

Photo #2
Side view of Building AT 3949 (I)

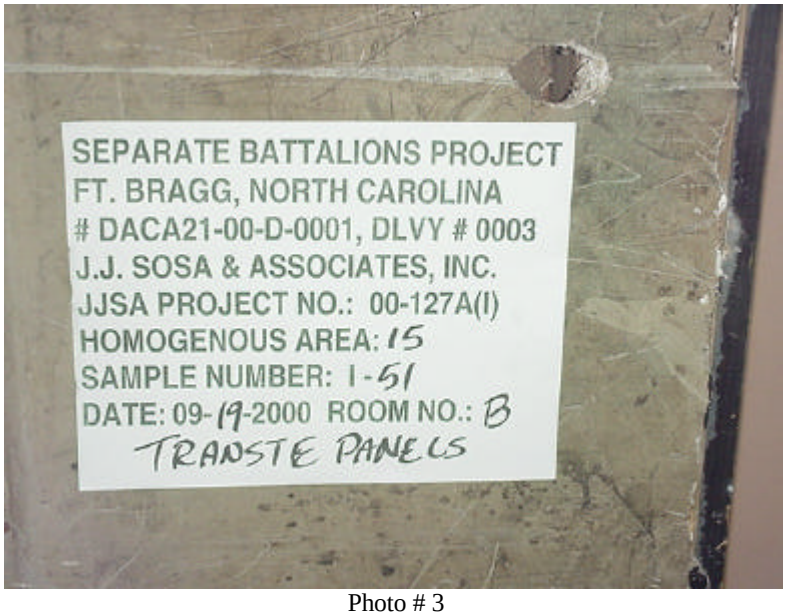

Photo # 3
Transite Panels
25% Chrysotile

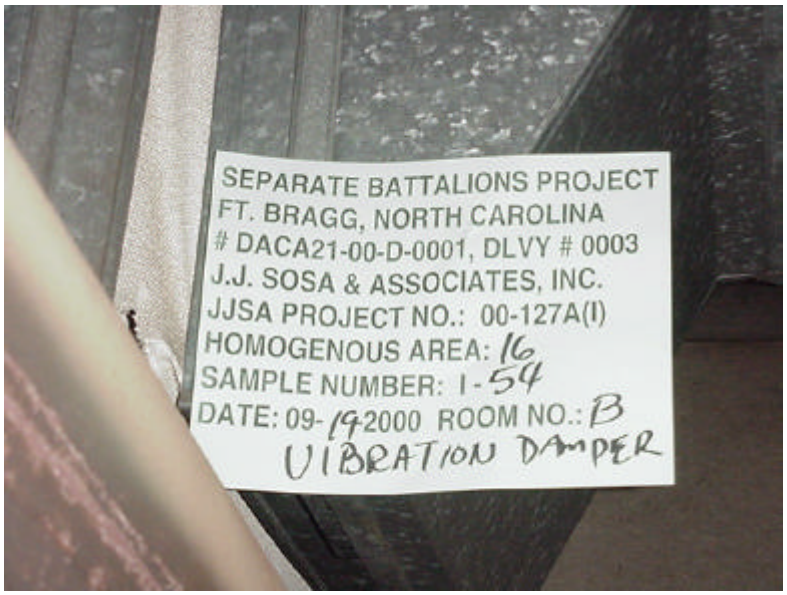

Photo # 4
Vibration Damper Cloth
50% Chrysotile

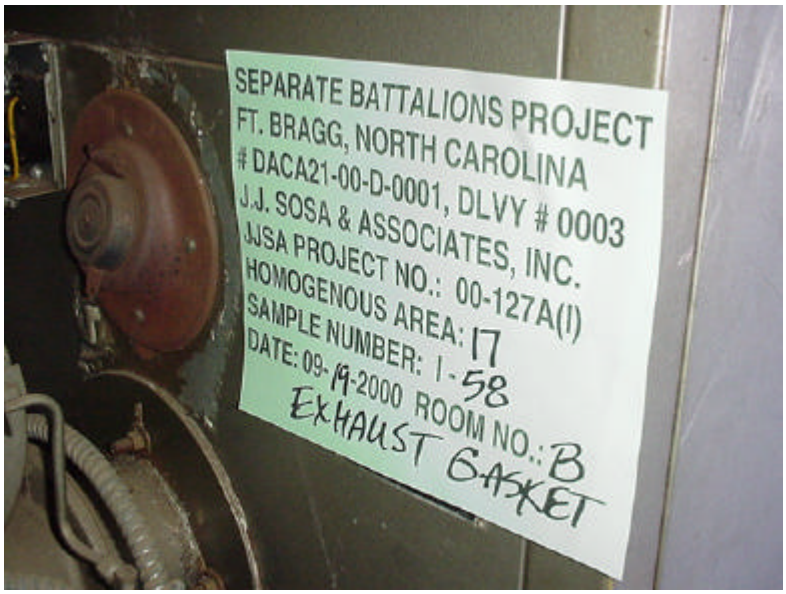

Photo # 5
Exhaust Gasket Sample # 57 and 58 Respective Photo
60% Chrysotile

BUILDING K-AT3956
ASBESTOS (ACM) SURVEY
REPORT

SEPARATE BATTALIONS BARRACKS PROJECT
FORT BRAGG, NORTH CAROLINA

DACA21-00-D-0001
DELIVERY ORDER-0003

Submitted To

Department of the Army
Savannah District, Corps of Engineers
P.O. Box 889
Savannah, Georgia 31402-0889

Submitted By

J.J. Sosa & Associates, Inc.
5811 Memorial Hwy., Suite 207
Tampa, Florida 33615-5000
(813) 888-6525
(813) 881-1285 (Fax)

October 30, 2000

TABLE OF CONTENTS

SECTION **PAGE**

APPENDICES

EXECUTIVE SUMMARY

J.J. Sosa & Associates, Inc. was retained by the U.S. Army Corps of Engineers (COE) Savannah District to perform asbestos surveys for the Separate Battalions CAB at Fort Braggs, North Carolina. The surveys of Asbestos-Containing Materials (ACM) were performed at several buildings located in the area "A" on the main post. Copy of a site location map is included in this report. The buildings surveyed are to be demolished. This report contains the findings of the survey performed in **Building K-AT3956**. The JJSA inspectors designated the structure for the purpose of the survey as **Building K**.

This effort consisted of review of existing building documentation, a walkthrough and visual inspection to identify and sample suspect ACM existing in the structures. Laboratory analysis was performed on all suspect ACM, including non-friable and suspect materials that may become regulated during demolition activities. A sample location plan illustrating the areas surveyed is provided in Appendix A.

During the survey of **Building K-AT3956** a total of **fifteen (15)** homogeneous areas were identified and sampled. A minimum of three (3) samples were collected from each homogeneous area and analyzed to determine whether they were below the regulatory threshold of 1% asbestos. Samples were given a unique alphanumeric identification (i.e. A-1, A-2, etc.). The letter represents the building designation provided by the inspectors to each building followed by a number starting with "1" increasing sequentially with the last number representing the total number of samples collected for the building.

The following materials were identified to contain asbestos in **Building K**:

- **150 ft.^{2} of 12" x 12" white streaks floor tile and mastic in men's room**
- **200 ft.^{2} of 12" x 12" black streaks floor tile and mastic women's room**

1.0 INTRODUCTION

JJSA personnel conducted an asbestos survey at **Building K-AT3956** on **September 17, 2000**. This report contains the findings of the Asbestos Survey in accordance with the scope of work provided by the COE Savannah District.

2.0 REGULATORY REVIEW AND PERSONNEL QUALIFICATIONS

2.1 REGULATORY REVIEW

Asbestos-related activities, such as demolition, O&M and abatement, are controlled by many federal and state regulations including those of the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA). OSHA has promulgated standards for permissible airborne fiber exposure limits and requirements for worker protection during abatement and management of ACM. The EPA regulations were signed into law to protect the building occupants and the environment. Highlights of key regulations are as follows:

A. EPA Regulations:

National Emissions Standards For Hazardous Air Pollutants (NESHAP) (40 CFR 61)

This rule provides guidelines for renovation and demolition notification, removal and disposal of ACM. Also included in the NESHAP are rules concerning manufacturing, spraying and fabrication of asbestos.

Asbestos Hazard Emergency Response Act (AHERA) (40 CFR 763, Subpart E)

The Asbestos Hazard Emergency Response Act (AHERA) was enacted to control the exposure of school children, teachers and custodial personnel to airborne asbestos fibers at their facilities. AHERA requires the identification, sampling, assessment and remediation/responses of identified ACM at schools kindergarten through 12th grade. AHERA was revised to require that all personnel conducting asbestos investigations in schools as well as commercial buildings be trained and certified according to the regulation.

EPA Worker Protection Rule (40 CFR 763.120,121)

This rule extends worker coverage to state and local employees who perform asbestos work and who are not covered by the OSHA Asbestos Standards or by a state OSHA Plan. Requirements include medical examinations, air monitoring and reporting, protective equipment, work practices and record keeping.

B. OSHA Regulations:

29 CFR 1926.1101: Construction Industry Standard

This standard covers employees engaged in demolition, construction, and response actions such as removal, encapsulation, alteration, repair, maintenance, insulation, spill/emergency clean-up, disposal and storage of ACM.

29 CFR 1910.1001; General Industry Standard

This standard controls the occupational exposures in general industry.

29 CFR 1910.134; Use of Respirators

The OSHA Respiratory Protection Rule defines the program and requirements as to when personnel are required and / or allowed to wear respirators. In general this OSHA coverage extends to all private sector employers and employees. Those not covered under the standard typically include self-employed persons and federal, state and local municipal employees.

State of North Carolina

In the State of North Carolina, any person who conducts asbestos work must be certified by the North Carolina Department of health and Human Services as provided in T15A: 19C.0600.

2.2 PERSONNEL QUALIFICATION

The survey fieldwork was performed on **September 17, 2000** by JJSA's representatives Mark Fohn and Rodney Carrero, PE under the direct supervision of Jose J. Sosa, PE, CIH. Mr. Sosa is a Certified Industrial Hygienist and a Professional Engineer. Mr. Carrero holds a current AHERA building inspection certificate from the State of North Carolina. Copy of the certificate and CIH certification is provided in

Appendix B.

3.0 SURVEY PROTOCOL

The survey was conducted using state-of-the-art protocol for sampling materials suspected of containing asbestos as indicated by the U.S. Environmental Protection Agency.

The survey involved a site inspection (visual walk-through) and identification of suspect ACM located in the building. An inventory of all accessible and / or exposed suspect ACM was conducted to determine all homogeneous materials inside and outside the building.

3.1 INACCESSIBLE AREAS NOT SURVEYED

An attempt was made by the inspector to reach all areas inside the building. However, if suspect materials are discovered during demolition in concealed spaces, demolition activities should stop and the materials sampled and analyzed.

3.2 MATERIALS NOT SAMPLED

There were no limitations noted during this asbestos survey. Bulk samples were collected from materials without concern for destruction to the structure or aesthetic damage since the building is schedule to be demolished. All suspect materials were given appropriate consideration. Likewise, materials visibly and completely identifiable as non-asbestos (fiberglass, foam rubber, wood, etc.,) were not sampled.

4.0 SAMPLING PROCEDURE

The technique used for sampling the suspected materials was designed to minimize possible fiber release and in turn possible contamination of surrounding areas. All representative "suspect" materials sampled, were collected in accordance with the EPA's AHERA and "Guidance for Controlling Asbestos Containing Material in Buildings" (EPA 560 / 6-85-024, June 1985).

The sample location was sprayed with an amended soapy water mixture. Then, a core sample of the material was collected and properly stored in labeled airtight bag. A chain of custody form was completed for all bulk samples collected and subsequently delivered to IATL Laboratories for analysis using Polarized Light Microscopy (PLM). IATL Laboratories utilizes dispersion staining techniques according to US EPA method 600 / M4-82-020 incorporating visual estimates of identified material percentages. Chain of Custody and analytical results are presented in Appendix C.

During the sampling activities, each suspect ACM was touched by the inspector to determine its friability and observed to determine the physical condition of the material. A friable material is defined as a material that can be crumbled, or reduced to powder by hand pressure. Friability of a material directly relates to a potential of the ACM to release airborne fibers. The more friable the ACM the more likely asbestos fibers will be released. The inspector assessed the suspect ACM according to their physical conditions.

The JJSA inspectors split the bulk samples every 20th sample collected. These samples were sent to Schneider Laboratories, Inc. for QA/QC.

5.0 FACILITY PHYSICAL DESCRIPTION AND SUMMARY OF SAMPLING RESULTS

5.1 FACILITY PHYSICAL DESCRIPTION

Refer to the attached Facility Description Form for the physical description of the building. Photographs of the facility are provided in Appendix D.

5.2 SUMMARY OF SAMPLING RESULTS

Table 1 included in this section contains a summary of suspect ACM identified and sampled by the accredited inspector during this survey.

5.2.1. Material Types

1. Surfacing Materials
No surfacing materials were identified during this survey.

2. Thermal Systems Insulation (TSI)
No Thermal Systems Insulation (TSI) was identified during this survey.

3. Miscellaneous Materials
Fifteen (15) homogeneous areas of homogeneous materials were identified during this survey.

5.2.2. Identified Asbestos Containing Materials

The following materials sampled at **Building K-AT3956**, were identified by Polarized Light Microscopy (PLM) analyses to contain asbestos in amounts of 1% or greater. A summary of the analytical results oft the materials tested are provided in Table 1.

- **150 ft.^{2} of 12” x 12” white streaks floor tile and mastic in men’s room**
- **200 ft.^{2} of 12” x 12” black streaks floor tile and mastic women’s room**

6.0 CONCLUSIONS

Vinyl floor tiles in the men's and women's rooms were found to contain asbestos. These materials are non-friable and do not require removal prior to wet demolition.

7.0 .....RECOMMENDATIONS

JJSA recommends that the structure be demolished using wet methods.

Table 1 ASBESTOS SURVEY AND ASSESSMENT

PROJECT NAME: SEPARATE BATTALIONS BARRACKS
ADDRESS: BLDG AT-3956 FORT BRAGG, NORTH CAROL
CONTRACT NO.: DACA21-00-D-0001
SURVEY DATE: 9/17/00 JJSA PROJECT NO.:00-127

CONSULTANT: **J. J. SOSA & ASSOCIATES, INC.**
AGENCY: U.S ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT
AGENCY CONTACT PERSON:

SAMPLE NO.	MATERIAL (TYPE)	HOMOGEN. AREA	SAMPLING LOCATION	QUANTITY	FRIABLE	TYPE & % ASBESTOS	CONDITION	DAMAGE POTENTIAL	COMMENTS
K-1	**12"x12" White Streak Floor tile/Mastic**	**HA-01**	**Mens Bathroom[1] N[2]**	**150 ft²**	**NO**	**2.1% Chrysotile**	**GOOD**	**LOW**	**Positive Black Mastic**
K-2	12"x12" White Streak Floor tile/Mastic	HA-01	Women's Bathroom M		NO	SNA	GOOD	LOW	**Assumed Posivite**
K-3	12"x12" White Streak Floor tile/Mastic	HA-01	Mens Bathroom N		NO	SNA	GOOD	LOW	"
K-4	**12"x12" Black Streak Floor tile/Mastic**	**HA-02**	**Mens Bathroom N**	**200 ft²**	**NO**	**3.2% Chrysotile**	**GOOD**	**LOW**	**Positive Black Mastic**
K-5	12"x12" Black Streak Floor tile/Mastic	HA-02	Womens Bathroom M		NO	SNA	GOOD	LOW	Assumed Posivite
K-6	12"x12" Black Streak Floor tile/Mastic	HA-02	Womens Bathroom M		NO	SNA	GOOD	LOW	"
K-7	Drywall/Joint Compound	HA-03	Plans and Operations F	16,640 ft²	NO	NAFD	GOOD	LOW	
K-8	Drywall/Joint Compound	HA-03	Corridor H		NO	NAFD	GOOD	LOW	
K-9	Drywall/Joint Compound	HA-03	Corridor H		NO	NAFD	GOOD	LOW	
K-10	Drywall/Joint Compound	HA-03	Plans and Operations F		NO	NAFD	GOOD	LOW	
K-11	Drywall/Joint Compound	HA-03	Plans and Operations F		NO	NAFD	GOOD	LOW	
K-12	Black Stair Treads	HA-04	Stairs Q	100 ft²	NO	NAFD	GOOD	HIGH	
K-13	Black Stair Treads	HA-04	Stairs Q		NO	NAFD	GOOD	HIGH	
K-14	Black Stair Treads	HA-04	Stairs Q		NO	NAFD	GOOD	HIGH	
K-15	Textured Ceiling Drywall	HA-05	Office V	984 ft²	NO	NAFD	GOOD	LOW	
K-16	Textured Ceiling Drywall	HA-05	Hallway CC		NO	NAFD	GOOD	LOW	
K-17	Textured Ceiling Drywall	HA-05	Hallway CC		NO	NAFD	GOOD	LOW	
K-18	2'x2' Directional Ceiling tile	HA-06	Office V	168 ft²	YES	NAFD	GOOD	LOW	
K-19	2'x2' Directional Ceiling tile	HA-06	Office V		YES	NAFD	GOOD	LOW	
K-20	2'x2' Directional Ceiling tile	HA-06	Office V		YES	NAFD	GOOD	LOW	
K-21	2'x4' Directional Ceiling tile	HA-07	Plans and Operations F	168 ft²	YES	NAFD	GOOD	LOW	
K-22	2'x4' Directional Ceiling tile	HA-07	Secretary J		YES	NAFD	GOOD	LOW	
K-23	2'x4' Directional Ceiling tile	HA-07	Office Z		YES	NAFD	GOOD	LOW	
K-24	12"x12" Pinhole Ceiling tile	HA-08	Office BB	663 ft²	YES	NAFD	GOOD	LOW	
K-25	12"x12" Pinhole Ceiling tile	HA-08	Office BB		YES	NAFD	GOOD	LOW	
K-26	12"x12" Pinhole Ceiling tile	HA-08	Secretary J		YES	NAFD	GOOD	LOW	
K-27	White A/C Duct Mastic	HA-09	Mechanical Room L	900 ft²	NO	NAFD	GOOD	LOW	
K-28	White A/C Duct Mastic	HA-09	Mechanical Room L		NO	NAFD	GOOD	LOW	
K-29	White A/C Duct Mastic	HA-09	Mechanical Room L		NO	NAFD	GOOD	LOW	
K-30	Bathroom Caulk	HA-10	Ladies Bathroom M	10 lf	NO	NAFD	GOOD	LOW	

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ADDRESS: BLDG AT-3956 FORT BRAGG, NORTH CAROL
CONTRACT NO.: DACA21-00-D-0001
SURVEY DATE: 9/17/00 JJSA PROJECT NO.:00-127

CONSULTANT: **J. J. SOSA & ASSOCIATES, INC.**
AGENCY: U.S ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT
AGENCY CONTACT PERSON:

SAMPLE NO.	MATERIAL (TYPE)	HOMOGEN. AREA	SAMPLING LOCATION	QUANTITY	FRIABLE	TYPE & % ASBESTOS	CONDITION	DAMAGE POTENTIAL	COMMENTS
K-31	Bathroom Caulk	HA-10	Mens Bathroom N		NO	NAFD	GOOD	LOW	
K-32	Bathroom Caulk	HA-10	Mens Bathroom N		NO	NAFD	GOOD	LOW	
K-33	Exterior Window Caulk	HA-11	Exterior	1,120 lf	NO	NAFD	GOOD	LOW	
K-34	Exterior Window Caulk	HA-11	Exterior		NO	NAFD	GOOD	LOW	
K-35	Exterior Window Caulk	HA-11	Exterior		NO	NAFD	GOOD	LOW	
K-36	Exterior Door Caulk	HA-12	Exterior	100 lf	NO	NAFD	GOOD	LOW	
K-37	Exterior Door Caulk	HA-12	Exterior		NO	NAFD	GOOD	LOW	
K-38	Exterior Door Caulk	HA-12	Exterior		NO	NAFD	GOOD	LOW	
K-39	Exterior Door Caulk	HA-12	Exterior	-	NO	NAFD	GOOD	LOW	QA/QC split from Sample # K-36
K-40	Black vinyl base board/Mastic	HA-13	Mens Bathroom M	200 lf	NO	NAFD	GOOD	LOW	
K-41	Black vinyl base board/Mastic	HA-13	Mens Bathroom M		NO	NAFD	GOOD	LOW	
K-42	Black vinyl base board/Mastic	HA-13	Ladies Bathroom N		NO	NAFD	GOOD	LOW	
K-43	VOID	-	-	-	-	-	-	-	VOID
K-45	White Shingle BUR	HA-15	Roof	4,140 ft^2	NO	NAFD	GOOD	LOW	
K-46	White Shingle BUR	HA-15	Roof		NO	NAFD	GOOD	LOW	
K-47	White Shingle BUR	HA-15	Roof		NO	NAFD	GOOD	LOW	

COMMENTS/ NOTES:

NAFD - NO ASBESTOS FIBERS DETECTED
SNA - Sample Not Analyzed
Good - Materials with No Damage .
Fair - Material with Localized Damaged (less than 10%).
lf - Linear Feet
ft^2 - Square Feet
BUR - Build up Roof
Mech. Room(1) - Functional Space - Name of the room as identified in the building by use or designation.
B(2) - Letter designation given arbitrarily to each space in the building. Starting with the letter "A" at one corner of the building and progressing clockwise throughout the entire facility..

The above materials, locations and quantities are approximate and general representations of the work involved. Specific references to the materials, locations, quantities and intent of the removal activities are to be outlined during a contractor's walk-through of the facility with the owner and/or consultant.

APPENDIX A

FIELD DRAWINGS & SAMPLING LOCATIONS

(SEE CONTRACT DRAWINGS)

APPENDIX B

LABORATORY RESULTS CHAIN OF CUSTODY SAMPLING FORMS

The American Industrial Hygiene Association

is proud to acknowledge that

International Asbestos Testing Lab

Mt. Laurel, NJ

has fulfilled the requirements for and has been formally recognized by AIHA and is technically competent to perform the analyses listed in the following

SCOPE OF ACCREDITATION

INDUSTRIAL HYGIENE Originally Accredited: 03/01/97		ENVIRONMENTAL LEAD Originally Accredited: 01/20/97		ENVIRONMENTAL MICROBIOLOGY
X Metals	___Silica	X Paint Chips	X Air	___Bacteria
X Asbestos PCM	X Asbestos PLM	X Dust Wipes	X Soil	___Fungi
___Organic Solvents	___Diffusive Samples			

The above named laboratory agrees to perform all analyses listed above in the scope of accreditation according to applicable policy requirements and acknowledges that continued accreditation is dependent on successful participation in the appropriate proficiency testing programs. This laboratory may be contacted to verify the current scope of accreditation, proficiency testing performance and accreditation status. Accreditation by AIHA is not a guarantee of the validity of the data generated by the laboratory.

Laboratory # 100188
Certificate # 644

Accreditation Expires: 01/20/03

Colleen Becker
Colleen Becker
Chair, Analytical Accreditation Board

James R. Thornton
James R. Thornton, CIH, CSP
President, AIHA

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation

INTERNATIONAL ASBESTOS TESTING LABORATORY

MT. LAUREL, NJ

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

AIRBORNE ASBESTOS FIBER ANALYSIS

June 30, 2001
Effective through

David E. Alderman
For the National Institute of Standards and Technology

NVLAP Lab Code: 101165-0

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation

DEPARTMENT OF COMMERCE * UNITED STATES OF AMERICA *

INTERNATIONAL ASBESTOS TESTING LABORATORY

MT. LAUREL, NJ

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BULK ASBESTOS FIBER ANALYSIS

June 30, 2001
Effective through

David F. Alderman
For the National Institute of Standards and Technology

NVLAP Lab Code: 101165-0

APPENDIX C

PERSONNEL CERTIFICATIONS

North Carolina
Department of Health and Human Services
Division of Public Health
2728 Capital Boulevard • 1912 Mail Service Center • Raleigh, North Carolina 27699-1912 • Courier 56-32-00
Ann F. Wolfe, M.D., M.P.H., Director

September 12, 2000

Rodney Carrero-Santana
16347 SW 83 Lane
Miami, FL 33193

Dear Mr. Carrero-Santana:

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Enclosure

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Tampa, FL 33634

NORTH CAROLINA
ASBESTOS ACCREDITATION

SSN		EXPIRATION	
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DOB	SEX	HT	WT
12-18-1964	M	5'11"	235
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INSPECTOR		11991	05-01

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Sincerely,

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Manager
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Occupational & Environmental Epidemiology Branch
(919) 733-0820

Enclosure

APPENDIX D

PROJECT PHOTOS

Photo #1
Front of Bldg. AT 3956 (K)

Photo #2
Side view of Building AT 3956 (K)

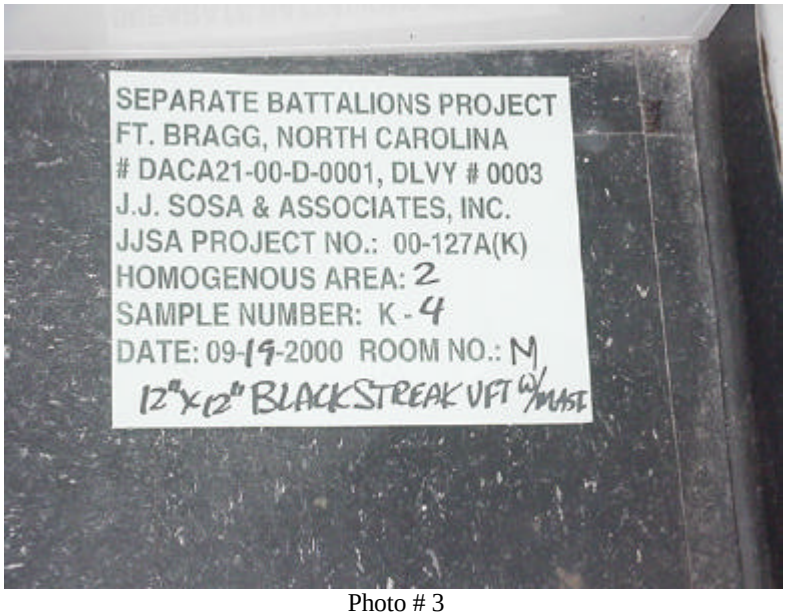

Photo # 3
12x12 Black Floor tile and Mastic
Mastic 3.2% Chrysotile